

The department of Earth System Science at the Center for Advanced Systems Understanding (CASUS) in GÃfÃrilitz, Germany invites applications for postdoctoral position focused on developing statistical methods to estimate encounter rates from animal tracking data.

The position will be available from 1 September 2022 (start date is negotiable), and the employment contract is limited to two years.

Job Background and Scope:

The successful candidate will be part of an internationally renowned team that focuses on statistical methods development for animal movement data. This work will build on and extend recent efforts to develop theory (Martinez-Garcia et al. 2020) and statistical methods (Noonan et al. 2021) related to encounter processes. The researcher will then use the resulting estimators to perform global-scale comparative analyses in a large, multi-species tracking dataset.

Tasks:

- Develop statistical methods to estimate a range of encounter-related metrics from animal relocation data
- Perform cross-species comparative analyses of encounter processes on a large, multispecies animal tracking database
- Work closely with collaborators whose collective expertise spans field ecology, the theory of encounter processes, and statistical methods and software development
- Publish results in academic, peer-reviewed journals
- Present results at scientific meetings

Qualifications:

- PhD degree in Quantitative Ecology, Physics, Statistics, Data science, Machine learning, or a related field
- Experience in model-based statistical analysis and statistical methods development
- Advanced programming skills in R
- Excellent communication skills in English in a professional context (presentation of research results at scientific meetings, colloquial discussions, manuscript writing)
- Evidence of the ability to publish results in top peer-reviewed journals
- Prior experience working with animal tracking data is advantageous but not required

Applications should include a cover letter, CV, and academic transcripts. The application period ends on 8 July, but review of applications will occur continuously. Additional details and the link to apply for the position can be found at <https://www.hzdr.de/db/Cms?pNid=490&pOid=66198&pContLang=en>

For questions about the position, please contact Justin Calabrese <j.calabrese@hzdr.de>.

For more information about CASUS, please see <https://www.casus.science>

Literature cited:

Martinez-Garcia, R., Fleming, C. H., Seppelt, R., Fagan, W. F., & Calabrese, J. M. (2020). How range residency and long-range perception change encounter rates. *Journal of Theoretical Biology*, 498, 110267.

Noonan, M. J., Martinez-Garcia, R., Davis, G. H., Crofoot, M. C., Kays, R., Hirsch, B. T., Fagan, W.F., Fleming C.F., and Calabrese, J. M. (2021). Estimating encounter location distributions from animal tracking data. *Methods in Ecology and Evolution*, 12(7), 1158-1173.